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DWPI	(soft tissue) and (calcium hydroxide)	2	<u>L1</u>

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**Search Results - Record(s) 1 through 2 of 2 returned.**☐ 1. Document ID: WO 9921595 A1, AU 9911189 A, US 5968999 A

L1: Entry 1 of 2

File: DWPI

May 6, 1999

DERWENT-ACC-NO: 1999-302909

DERWENT-WEEK: 200019

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TITLE: Bone cement composition

INVENTOR: PEINDL, R D; RAMP, W K

PATENT-ASSIGNEE: CHARLOTTE-MECKLENBURG HOSPITAL AUTHORITY (CHARN)

PRIORITY-DATA: 1997US-0959498 (October 28, 1997)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9921595 A1	May 6, 1999	E	011	A61L025/00
AU 9911189 A	May 17, 1999	N/A	000	A61L025/00
US 5968999 A	October 19, 1999	N/A	000	A61K006/08

DESIGNATED-STATES: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB  
GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW  
MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW AT BE CH  
CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 9921595A1	October 23, 1998	1998WO-US22529	N/A
AU 9911189A	October 23, 1998	1999AU-0011189	N/A
AU 9911189A		WO 9921595	Based on
US 5968999A	October 28, 1997	1997US-0959498	N/A

INT-CL (IPC): A61K 6/08; A61L 25/00

ABSTRACTED-PUB-NO: US 5968999A

## BASIC-ABSTRACT:

NOVELTY - A bone cement composition comprises 70-90 wt.% of a polymer comprising a polymethylmethacrylate, and a liquid monomer, and to 30 wt.% of calcium hydroxide.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a bone cement comprising:

(i) 70-90 wt.% of a mixture of methylmethacrylate and methacrylate and a catalyst to accelerate hardening of the polymer formed by the mixture;

(ii) 10-30 wt.% of calcium hydroxide;

(iii) 1-20% barium sulfate; and

(iv) an antibiotic.

## ACTIVITY - Osteopathic.

MECHANISM OF ACTION - Bone cell (osteoblast) metabolism is stimulated by maintaining or elevating local pH in the bone adjacent to bone cement due to the slow release of calcium and hydroxide ions from the cement matrix. This augments the formation of new bone. Calcium hydroxide released from the bone cement stimulates bone glucose metabolism and collagen synthesis. Bones were co-incubated without (control) or with non-impregnated, or tobramycin Ca(OH)<sub>2</sub>-impregnated polymethylmethacrylate beads. In this experiment, the medium was not changed for 3 days to more closely mimic the conditions of an infected area in vivo, e.g. accumulation of metabolic waste products and acid due to hypoxic conditions from poor tissue perfusion and from bacterial activity. For all 3 variables, tobramycin impregnated beads depressed bone metabolism compared to control tibiae. In contrast, Ca(OH)<sub>2</sub> or tobramycin plus Ca(OH)<sub>2</sub> beads produced highly stimulated bone metabolism compared to control, even when tobramycin was present in the combination beads. Bone metabolism was not affected by polymethylmethacrylate without additives.

USE - The composition may be used in conditions in which hard and soft tissues are compromised due to decreased local environmental pH e.g. in open and closed fractures, infections, decreased tissue perfusion and disease states. In these situations, the bone cement may be used as a structural component, adjuvant therapeutic agent or a drug delivery system. The cement composition may be used e.g. for implant seating for arthroplasty and filling of bony defects resulting from trauma or tumor resection. Antibiotic delivery systems may be used for treating osteomyelitis.

ADVANTAGE - High toxic doses of antibiotics are needed to treat bone infections. The calcium hydroxide in the composition ameliorates the toxic effect of the antibiotic as it is released from the composition.

ABSTRACTED-PUB-NO: WO 9921595A

EQUIVALENT-ABSTRACTS:

NOVELTY - A bone cement composition comprises 70-90 wt.% of a polymer comprising a polymethylmethacrylate, and a liquid monomer, and to 30 wt.% of calcium hydroxide.

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CHOSEN-DRAWING: Dwg.0/0

DERWENT-CLASS: A14 A60 A96 B03 B07 D22 P34

CPI-CODES: A04-F06E5; A08-C07; A08-C09; A12-V02; B04-C03B; B14-N01; D09-C;

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KAMC	Draw Desc	Image
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☐ 2. Document ID: FR 2510400 A, US 4375968 A

L1: Entry 2 of 2

File: DWPI

Feb 4, 1983

DERWENT-ACC-NO: 1983-25645K

DERWENT-WEEK: 198311

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TITLE: Calcium hydroxide contg. dental compsn. for use on periodontal tissue - comprises 1st paste of hydroxide, ethyl:toluene-sulphamide, zinc oxide and stearate and 2nd contg. methyl salicylate and butylene-glycol

INVENTOR: MANHART, M J

PATENT-ASSIGNEE: MANHART M J (MANHI)

PRIORITY-DATA: 1981US-0281978 (July 10, 1981)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
FR 2510400 A	February 4, 1983	N/A	011	N/A
US 4375968 A	March 8, 1983	N/A	000	N/A

INT-CL (IPC): A61K 6/00

ABSTRACTED-PUB-NO: FR 2510400A

BASIC-ABSTRACT:

Preparation for the treatment and/or prophylaxis of dental troubles, esp. a dentifrice paste, which contains calcium hydroxide ethyltoluene-sulphonamide, zinc oxide and zinc stearate, in combination with methyl salicylate, 1,3-butylene-glycol and a gum. Pref. the preparation is formed from two pastes, the first containing 50-54% calcium hydroxide, 30-37% ethyltoluene-sulphonamide, 9-10% zinc oxide and 0.3% of zinc stearate, whilst the second comprises 19.6% of methyl salicylate, 78.4% of 1,3-butylene-glycol and 2% of gum, with the final paste being formed from 49% of the first paste and 51% of the second paste. Other variations, depending on use are also described.

Calcium hydroxide based dental compsn., the alkaline properties of which are controlled so as to give a preparation which can be safely used on periodontic, gingival and soft tissue and controls bacterial infection. The two paste compsn. may also be used for dressings after extractions and for preparing various fillings and cements e.g. for crowns and bridges, dental sutures.

ABSTRACTED-PUB-NO: FR 2510400A  
EQUIVALENT-ABSTRACTS:

DERWENT-CLASS: B05 B06 D21  
CPI-CODES: B04-C02; B05-A01B; B05-A03A; B10-A08; B10-E02; B10-E04C; B12-A01;  
B12-L03; D08-B08;

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CALCIUMS.DWPI.	3
CALCIA.DWPI.	1417
CALCIAS	0
HYDROXIDE.DWPI.	63408
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